REMARKS

Status of the Claims

This application has been reviewed in light of the Office Action dated August 2, 2006. Claims 1 and 4-19 are presented for examination, of which Claims 1 and 19 are independent. Claims 1 and 10 have been amended to define more clearly what Applicants regard as their invention. Claim 19 has been added to provide Applicants with a more complete scope of protection. Favorable reconsideration is requested.

Applicants note with appreciation the indication that Claims 7 and 8 would be allowable if rewritten in independent form. Applicants presume that Claim 9 is also allowable, as it depends from allowable Claim 8 (and is indicated as "objected to" in the Office Action Summary). The Examiner is respectfully requested to indicate the allowability of Claim 9 in the next official communication. Claims 7-9 have not been rewritten in independent form herein because, for the reasons given below, their base claim is believed to be allowable.

Prior Art Rejections

Claim 1, 4-6, 10-13, and 16 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,172,894 ("Hein"). Claims 17 and 18 were rejected under 35 U.S.C. § 103(a) as obvious over Hein. Claim 14 was rejected as obvious over Hein in view of U.S. Patent No. 6,622,996 ("Mayerbock"). Claim 15 was rejected as obvious over Hein in view of U.S. Patent No. 5,301,414 ("Gautheron").

Claim 1

Claim 1 is directed to a hydroelastic joint for assembling two pieces of a structure and for damping vibrations transmitted between each piece, the joint being suitable for assembly of ground contact members to a main structure of a vehicle. Claim 1 recites, *inter alia*, that the second elastically deformable element has a longitudinal dimension less than a corresponding longitudinal dimension of the first elastically deformable element, in order to limit a transverse deformation of the first elastically deformable element during a relative tilting of the longitudinal axes of the reinforcements about at least one transverse tilting axis, the longitudinal dimension of each of the first and second elastically deformable elements being defined as an axial dimension of a portion that substantially fills a radial space between the corresponding reinforcements.

Hein relates to an elastomeric/fluid engine mount having an outer elastically deformable element (outer spring assembly 7) and an inner elastically deformable element (inner spring assembly 6). The inner spring assembly (6) has recessed portions 11 and 12.

The Office Action states that Hein's recesses (11 and 12) result in the inner spring assembly (6) having a longitudinal dimension less than that of the outer spring assembly (7). However, as shown in Fig. 2 of Hein, the longitudinal dimension (as that term is now defined in Claim 1) of both of Hein's elastically deformable elements extends nearly to the ends of Hein's joint. Thus, Hein's elastically deformable elements have approximately the same longitudinal dimension. Moreover, Hein's specification is silent as to the relative lengths of the elastically deformable elements.

It is therefore respectfully submitted that Hein does not teach or suggest a second elastically deformable element that has a longitudinal dimension less than a

corresponding longitudinal dimension of a first elastically deformable element, as recited in Claim 1.

Furthermore, it is clear that Hein's inner spring assembly 6 is fitted without adhering inside the outer spring assembly 7. This can be seen from the rounded ends of inner spring 9 and reinforcement 15 (see Fig. 2) and from the fitting stop (on the right side of reinforcement 15), which is designed to stop the inner sleeve 10 and inner spring assembly (6) as they are longitudinally inserted into the assembly. Nothing has been found or pointed out in Hein that would teach or suggest that the first and second elastically deformable elements adhere on a central portion with a constant cross-section of the intermediate reinforcement, as recited in Claim 1.

Accordingly Claim 1 is believed to be patentable over Hein.

Claim 19

New Claim 19 recites, inter alia, that the second elastically deformable element has recesses in an axially outer portion thereof, in order to limit a transverse deformation of the first elastically deformable element during a relative tilting of the longitudinal axes of the reinforcements about at least one transverse tilting axis. The second elastically deformable element includes cells positioned within the recesses, the cells having a radial dimension less than a radial dimension of the recesses.

Nothing has been found or pointed out in Hein that would teach or suggest cells positioned within recesses in the second elastically deformable element, much less cells having a radial dimension less than that of the recess, as recited in Claim 19.

Accordingly, Claim 19 is believed to be patentable over Hein.

A review of the other cited references, Mayerbock and Gautheron, has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Claims 17 and 18

Dependent Claim 17 recites an axle for an automotive vehicle comprising a beam bearing symmetrically at each of its ends a respective wheel support, the beam being provided symmetrically with two joints in order to assemble the beam to a main structure of the automotive vehicle and to damp vibrations, characterised in that the joints are hydroelastic joints according to Claim 1, 4, 5, 6, 7, 8, 9, 10, 11, or 12.

Dependent Claim 18 recites an axle according to claim 17, characterised in that the joints are fixed to the beam in order that a respective axis of each of the joints forms an angle α greater than 20° with a direction defined by the two wheel supports.

As the Office Action acknowledges, Hein does not disclose the use of a hydroelastic joint with a vehicle axle. The Examiner asserts that it "would have been obvious to one of ordinary skill in the art to have utilized the joint of Hein et al. in combination with a vehicle axle as warranted, thus providing a joint with an easy means by

which to alter the spring rate as necessary." (Office Action at page 5). Applicants respectfully traverse this assertion for the following reasons.

As noted above, Hein relates to an engine mount. As such, Hein's joint has a high rigidity with respect to conical deformation. This can be seen from the long length of the inner spring (9) and the large thickness of the end walls of the outer spring (14) forming the chamber (19). It is respectfully submitted that one of ordinary skill in the art would understand that engine mount joints have a high rigidity with respect to conical deformation, which is not a problem in practice, because in ordinary use, engine mounts are submitted mostly to radial deformation. One of ordinary skill in the art would further understand that engine mount joints such as Hein's are designed for a conical deformation of a very small angle, typically 3°. This is confirmed by the presence of a fitting stop (see Fig. 2, right hand side of intermediate sleeve 15), which clearly prevents the relative movement of the intermediate sleeve (15) with respect to the inner sleeve (10) in a direction of conical deformation. Such features are incompatible with the assembly of the ground contact member to a main structure of a vehicle (see page 5, lines 8-10 of Applicants' specification).

Furthermore, as discussed above, Hein's inner spring assembly 6 is fitted without adhering inside the outer spring assembly 7. Hence, any torsion force changes into slipping. This is also incompatible with the assembly of a ground contact member to a main structure of a vehicle, because damping and spring effect may be necessary in case of torsion of the joint (see page 9, lines 7-9 of the specification).

For at least these reasons, it is respectfully submitted that Hein teaches away from being used with a vehicle axle, as hypothesized by the Examiner. Accordingly, it is

believed that *prima facie* obviousness has not been established with respect to Claims 17 and 18, and withdrawal of the rejection of these claims is therefore requested.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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